N° 122 is a Piece of another Grinder, perhaps of an Elephant. It hath very apparent Marks of being foſſile, as well as the preceding, and is farther remarkable, for that a petrifying Subſtance being got between the Lamellæ hath very conſiderably ſeparated and divided them from each other, in ſuch a Manner, that they appear to have been ſet very looſe.

N° 427, of my Collection of Quadrupeds and their Parts, is Part of an Elephant's Skull which was found at *Glouceſter* after the Year 1630, together with ſome large Teeth, ſome five, others ſeven Inches in Compaſs, according to a ſhort Inſcription wrote upon this very Piece.

N. B. Tab. 11. Fig. 7. is one of the Tusks of the young Elephant that died at *London*, of which Mention hath been made above.

II. *Obſervationes Aſtronomicæ à R. P.* Joh. Baptiſta Carbone *tranſmiſſæ, communicante* Iſ. de Seguera Samuda, *M. D. R. S. S. & Coll. Med.* Lond. *Lic.*

Obſervatio Solaris Eclipſis propè Ulyſſiponem habita *die* 15 Septembris *Manè* 1727. N. S. *à P.* Joanne Baptiſta Carbone S. J.

IN *Prædio*, quod eſt occidentalius noſtro Collegio D. Antonii M. 4″ hor. circiter, & cujus Latitudo Quadrante aſtronomico trium pedum explorata, eſt 38° 42′ 58″, obſervavi hanc Eclipſim Teleſcopio pedum circiter 8, quod micrometro inſtruxeram vite comparato. Initium infra horizontem celebratum eſt; jamque digitos circiter 4 deficiebat Sol, quando ex oppoſito monte primò emerſit. Sequentes tamen phaſes

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obſervari tantùm potuere, reliquis fortuito eventu impeditis.

Digiti		H.	′	″	
	Immerſ.	*Temp.*		*Ver. corr.*	
VI ½	— — — —	5	55	8.	*dub.*
VIII.	— — — —	6	10	54.	*dub.*
VIII,	m. i′, ſec. 48″ max. obſc.	6	13	29.	*circ.*
	Emerſ.				
VI ½	— — —	6	31	49.	
VI	— — —	6	35	23.	
V ½	— — —	6	38	45	
V	— — — —	6	41	57	
IV ½	— — —	6	45	2	
IV	— — —	6	47	59	
III ½	— — —	6	50	49	
III	— — —	6	53	34	
II ½	— — —	6	56	16	
II	— — — —	6	58	54	
I ½	— — —	7	1	28	
I	— — —	7	3	59	
	— — —	7	6	28	
Finis Eclipſis	— —	7	9	2.	*certiſſ.*

Poſt finem Eclipſeos, ſtatim horologium pendulo inſtructum, quo ad temporis dimenſionem uſus ſum, duplici Solis altitudine eodem quadrante aſtronomico ſucceſſivè obſervatâ, ad trutinam revocavi; inventamque correctionem, in phaſibus ſuperiùs adnotatis adhibui.

Octobris die 15, Immerſionem intimi Jovis Satellitis obſervavi, teleſcop. ped. 22. Contigit autem H. 9 10′ 54″.

Novem-

Novembris 7, ejuſdem Satellitis Immerſ. eodem teleſcopio, *H.* 9. 25′ 45″.

Obſervationes Romæ *habitæ in Eclipſi Solis, Manè conſpecta eodem die ad Radices* Collis Quirinalis.

Horæ. Minuta. Secunda Temporis veri poſt mediam noctem ex tranſitu Solis rectificatur.

H. ′ ″

7. 0. 0. INtendebam ad conſpectum Sirij verſantis in vicinia meridiani; cum ex Ephemeridum calculis poſt aliquot minuta Eclipſeos initium promitteretur. Interea tamen directo in Solem tubo optico, exceptaque in charta imagine, jam cæpiſſe video Eclipſim ex aliquot minutis horariis. Videram die præcedenti maculas plures apparere in diſco Solis: Quas cum in figura ſuis locis reddere cuperem ante initium Eclipſeos, ne differem poſt earumdem contectionem a diſco Lunæ commenſum illarum, ac ſitum reſpectu azimuthi adnotare; huic deſcriptioni ſtatim incumbendum duxi, adeoque phaſes Eclipſeos priores attendere prætermiſi. Completa celeriter macularum delineatione ſequentes phaſes accurate adnotavi cum V. C. Jo. Dominico Maraldi, uno verò ex meis domeſticis numerante horaria ſecunda temporis clarâ voce in horologio pendulo inſtructo, & pluribus diebus ante ad meridiem exacto, ad phaſes ſingulas. (*Vid. Tab.* 3.)

7. 2. 17. Latent Solaris diſci digiti tres cum quadrante à Luna contecti. Interſectio diſcorum

Solis, & Lunæ incidit in gr. 5. & 95. numeratis à puncto, quod eſt in figura inverſa verticale, nempe *A*. Macula *a* eſt in plano azimuthi per centrum Solis à Zenith ducti, & diſtat in ſemidiametro diſci Solaris à centro verſus peripheriam digitis 4 $\frac{1}{4}$, ut in figura. Etiam macula *e* in eodem ferè
H. 1 '' Azimutho verſatur.

7. 21. 47. Cum per aliquod temporis intervallum nubes intercepiſſent adſpectum Solis, paulo ante reſtituta ſerenitate, nunc ſpectantur à Luna contecti digiti Solaris diſci 4 $\frac{1}{2}$. Interſectio diſcorum Solis, & Lunæ fit in gr. diſci Solaris 10. & 111. ut antea à puncto *A* imaginis per Lævam reſpicientis numeratis.

7. 24. 0. Veſtigium dilutionis maculæ *m* prope *b* ſitæ Lunæ diſcum ſubit.

7. 24. 40. Macula *b* incipit perſtringi à diſco Lunæ.

7. 25. 11. Eadem macula *b* tota immergitur.

7. 27. 41. Initium maculæ *c* incipit ſubire diſcum Lunæ.

7. 28. 31. Eadem macula *c* tota jam occultatur.

7. 29. 10. Digiti Solaris diametri 5 $\frac{1}{2}$ latent.

7. 31. 9. Latent digiti 5 $\frac{1}{4}$. Interſectio diſcorum utriuſque Luminaris fit in gr. 20, & 136.

7. 38. 45. Latent digiti 6, & gr. 31. atque 150 Solaris diſci ſunt puncta interſectionum cum Lunari.

7. 40. 58. Macula *d* Limbus prior à Lunæ circulo perſtringitur.

7. 41. 45. Tota macula *d* jam latet.

7. 43. 15. Conteguntur Solis digiti 6 $\frac{1}{4}$; & interſectio diſcorum incidit in gr. 39. & 162.

H. ′ ″

7. 45. 26. Maculæ ferme Evanidæ *f* Limbus perſtringitur ab incurſu Lunæ.
7. 46. 20. Tota macula *f* à Luna contegitur.
7. 50. 0. Latent digiti 6 $\frac{1}{4}$, & luminarium peripheria ſe interſecant in gr. 61. & 185.
8. 0. 12. Latent paulo minus quàm digiti ſex, ſeu 5 $\frac{7}{8}$, interſecant ſeſe diſci in gr. 62. & 182.
8. 2. 25. Latent digiti 5 $\frac{3}{4}$ ex gr. 63. ad 183.
8. 5. 24. Latent digiti 5 $\frac{1}{4}$. Interſectio Luminarium diſci in gr. Solaris 80. & 192.
8. 8. 32. Latent digiti 5. Interſectio in gr. 82 $\frac{1}{2}$, & 192 $\frac{1}{2}$.
8. 11. 50. Incipit emergere Limbus prior maculæ *b*.
8. 12. 38. Tota macula *b* extra Limbum Lunæ; & macula *n* eidem proxima ſimul exit.
8. 14. 46. Emergit etiam macula *m* vicina maculæ *b*.
8. 16. 34. Emergit quoque macula *l* eidem *b* proxima.
8. 18. 29. Macula *c* emergit.
8. 22. 38. Latent digiti 3 $\frac{1}{2}$. Interſectio diſcorum in gr. 105. & 195.
8. 23. 40. Incipit emergere macula *d*.
8. 24. 10. Tota macula *d* extra diſcum Lunæ.
8. 27. 23. Latent digiti 2 $\frac{1}{2}$. Interſectio diſcorum fit in gr. Solaris 115. & 182.
8. 34. 5. Incipit emergere è diſco Lunæ prior limbus maculæ *e*.
8. 34. 55. Tota macula *e* extra limbum Lunæ.
8. 35. 46. Latent digiti 1 $\frac{1}{2}$.
8. 37. 9. Latent digiti 1 $\frac{1}{4}$.
8. 37. 27. Exeunt extra Limbum Lunæ maculæ *g*, & *h*, ſitæ prope maculam *e*.

H. ′ ″

8. 39. 46. Latent digiti o ¾. Interſectio Limborum utriuſque diſci Luminarium in Solari incidit in gr. 140. & 180.

8. 42. 8. Limbus ſuperior Solis diſtat à Vertice gr. 58. 1′. inſpectus per quadrantem aurichalchicum tubo inſtructum, cujus radius eſt palm. Rom. 3.

8. 44. 10. Finis Eclipſeos, nunc primum excedente omnimodè ex Limbo Solis Lunæ diſci extremo.

8. 46. 53. Limbus ſuperior Solis per quadrantem aurichalchicum inſpectus diſtat à vertice gr. 57. 30′. adeoque centrum Solis diſtat à vertice gr. 57. 46′.

8. 48. 1. Limbus ſuperior Solis iterum inſpectus diſtat à vertice gr. 57. 20. adeoque centrum Solis diſtat à vertice gr. 57. 36′.

Limbus inferior Solis diſtat à vertice per ſupradictum quadrantem gr. 57. 20′. adeoque centrum Solis diſtat à vertice gr. 57. 4′.

Eadem die in meridie cœlo clariſſimo

11. 58. 25. Primus Solis limbus cum penumbra attingit lineam meridianam.

0. 1. 35. Secundus Solis Limbus cum penumbra attingit Lineam meridianam.

H. ′ ″

Ergo Meridies — 0. 0. 0.

In meridie diſtantia à vertice per quadrantem explorata fuit

Gr. 38. 27′. Limbi ſuperioris. } Centri Solis
Gr. 38. 59′. Limbi inferioris. } gr. 38. 43′.

Obſervatio

Obſervatio Solaris deliquii die 14 *Septembris* 1727. N. S. *habita in Obſervatorio* Bononienſi *à Cl.* Euſtachio Manfredi.

PLurimæ in Sole maculæ hujuſce Eclipſis tempore videbantur: Cùm tamen præ nubibus neceſſariæ circa illas inſtitui obſervationes non potuerint, ut earum ſitus in Solari diſco deprehenderetur, præcipuarum tantùm aſpectus in appoſita figura exhibetur, qualis inferri potuit ex obſervationibus veſpere diei 14. circa hor. 5. 26′. habitis; idque ſatis eſſe arbitror ad eas indicandas quæ ſunt à Luna occultatæ Eclipſis tempore. Notandum tamen, prædictas maculas, ex quo obſervatæ ſunt veſpere diei 14. uſque ad Eclipſis tempus, non modo ſingulas in ſuo parallelo Solari proceſſiſſe, quantum regularis motus Solis fert, verùm etiam pleraſque earum ſine lege immutatas apparuiſſe tum figurâ, tum magnitudine; nonnullas etiam in plures diviſas, aliaſque in unum compactas; alias demum in Limbo Solis orientalis viſas, quæ veſpere præcedenti non apparebant.

Initium Eclipſis obſervari non potuit; ſed hor. 18. 55′. 48″. Aſtronomic. ſenſibilis apparebat defectus, ut inter nubes.

H.	′	″	
18.	59.	37.	Unus digitus, & amplius fortaſſe latebat.
19.	3.	12.	Digitus cum dimidio.
19.	6.	50.	Duo digiti.
19.	10.	11.	Duo cum dimidio. *dub.* Paulò poſt nubes Solem obtegunt.
19.	30.	35.	Sol inter nubes videtur deficere plus digitis 4 cum dimidio.

Eclipſis

H. ′ ″

19. 35. 46. Eclipſis nondum pertingere videtur ad 5 digit.

19. 40. 47. Quinque digiti circiter.

19. 44. 31. Maculæ, *b*, *c*, *d*, *e*, jam latebant. Nunc occultatur centrum, *i*.

19. 47. 27. Limbus ☾ inter maculas, *s*.

19. 47. 46. Secunda ex duabus maculis, *s*, omnino tegitur.

19. 51. 37. Eclipſis eſt paulò minor 5 digit. inter nubes.

19. 54. 12. Centrum maculæ, *p*, occultatur.

19. 55. 37. Centrum, *q*, item occultatur.

19. 59. 2. Quatuor dig. cum dimidio eclipſantur. *dub.*

20. 1. 22. Una ex maculis prope limbum (fortaſſe *n*) occultatur.

20. 10. 10. Eclipſis paulò min. dig. 3 ½.

20. 11. 47. Tota macula *i*, emerſit.

20. 15. 0. Eclipſis 3 digitorum.

20. 18. 48. Duorum cum dimidio.

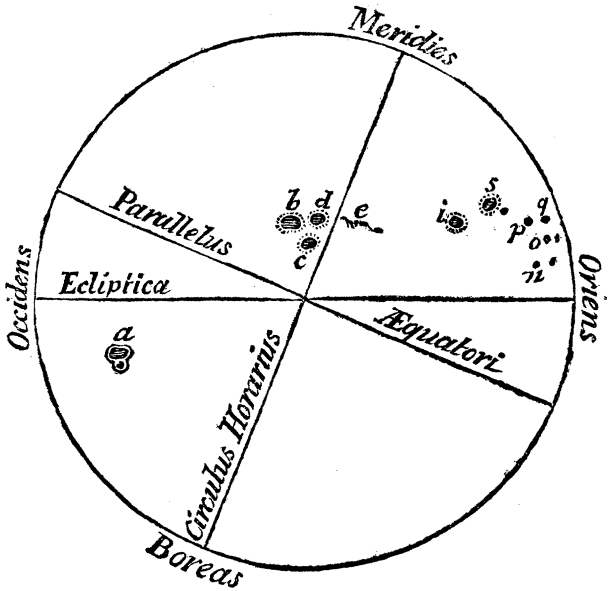
20. 18. 49. Incipit emergere macula, *s*.

20. 22. 26. Duo digiti circiter eclipſantur.

20. 26. 14. Digitus 1 ½.

20. 36. 6. Finis Eclipſeos a tribus obſervatoribus notatus, in eodem ſecundo temporis concordibus.

14. *Septembris*, 1727, *hora* 5. *min.* 26.
Figura macularum Solarium inverſo ſitu.



Obſervatio defectus Solis habita Patavii XVIII. *Kal. Octobris* 1727. N. S. *a Comite* Joanne Poleno.

DEnſioribus tamen nubibus ſæpius intercurrentibus, non plures obſervari potuerunt Phaſes, quam eæ, quas ſubjeci.

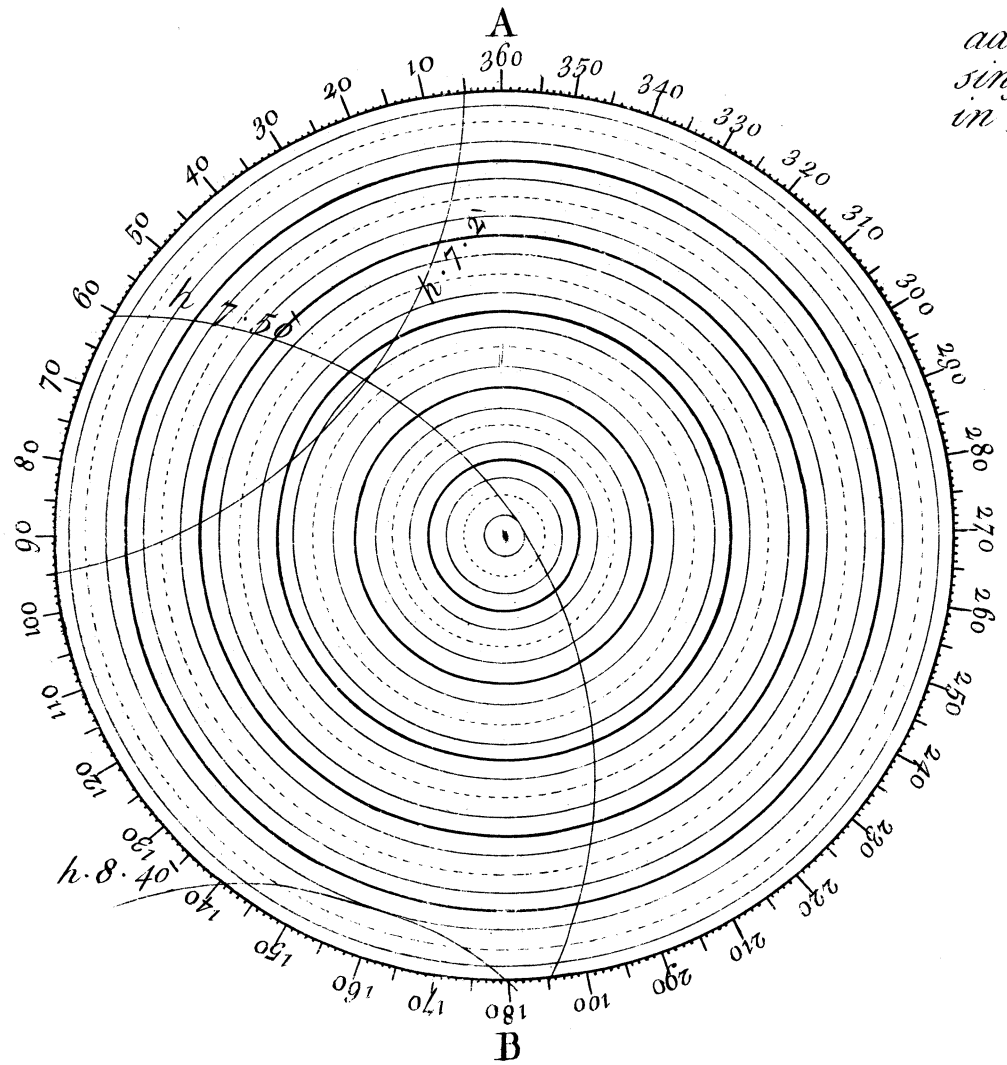
Temp. Ver. H.	′	″	*Digit.*	′
19.	3.	45.	0	10
	24.	12.	3	0
	41.	27.	4	30
20.	30.	45.	1	30
	38.	42.	Finis.	

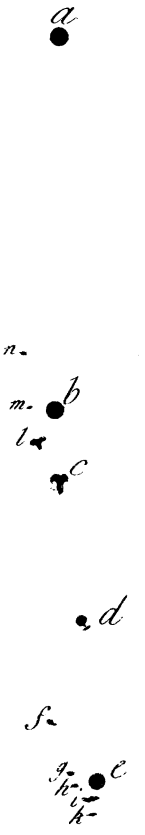
Philo: Trans: N.o 403

Solaris Eclipsis observata

AB planum Circuli Verticalis per centrum Solis ducti

Maculæ in figu
suis locis c
hic repe
ad exprimendu
singularum in
in serie obser

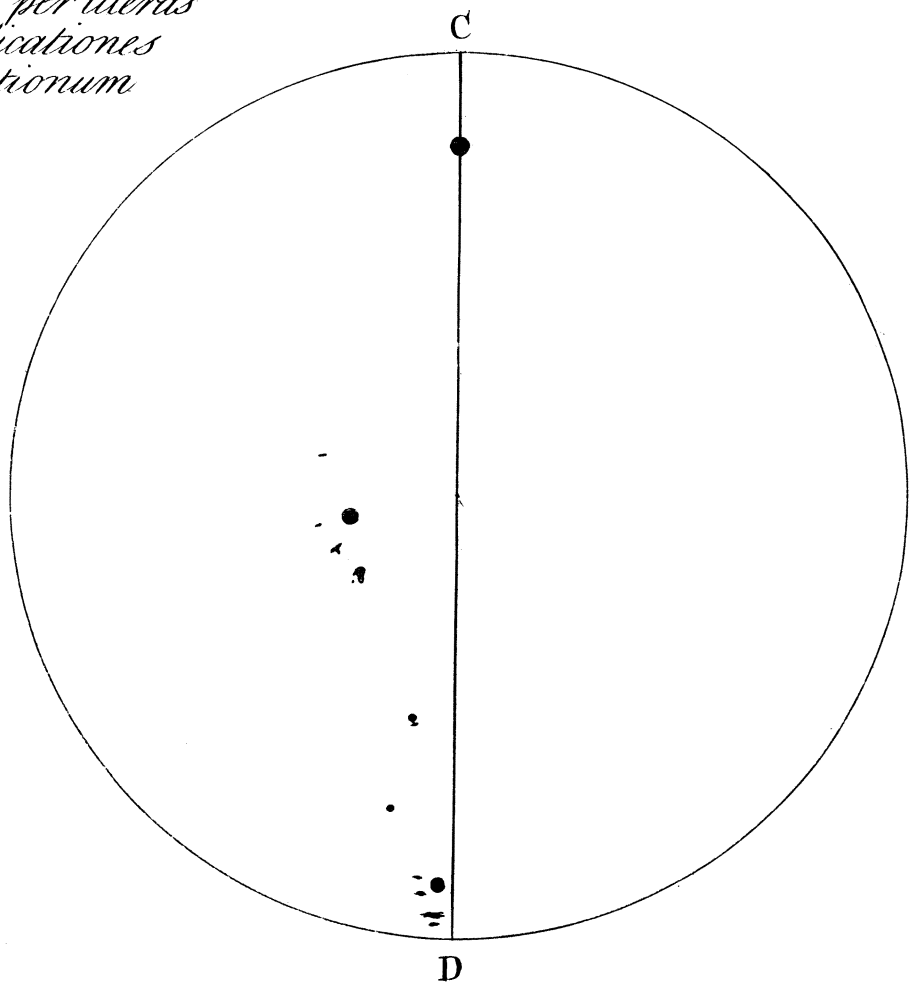




Discus Solis in digitos XII et quadrantes digitorum divisus in quo gradus peripheriæ 360 ab apice A sinistrorsum procedendo notantur, ut per singulas phases intersectio communis cum disco Lunæ indicari possit

vata Romæ die 15 Septembr: 1727. N. S.
figura Solaris Disci CD
ocis collocatæ
repetuntur
rendum per literas
um indicationes
bservationum

CD planum circuli Verticalis
per centrum Solis ducti



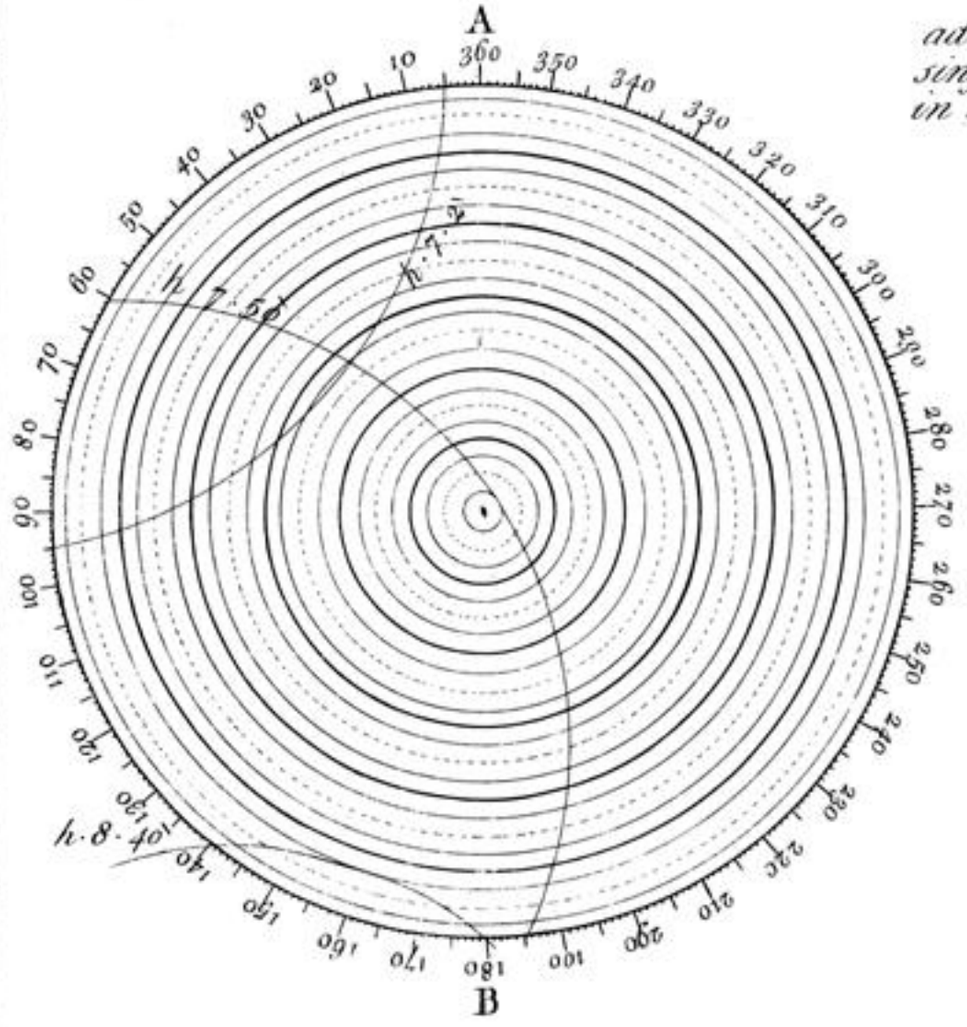
Maculæ in disco Solis
per Telescopium in chartam excepto
ita erant constitutæ

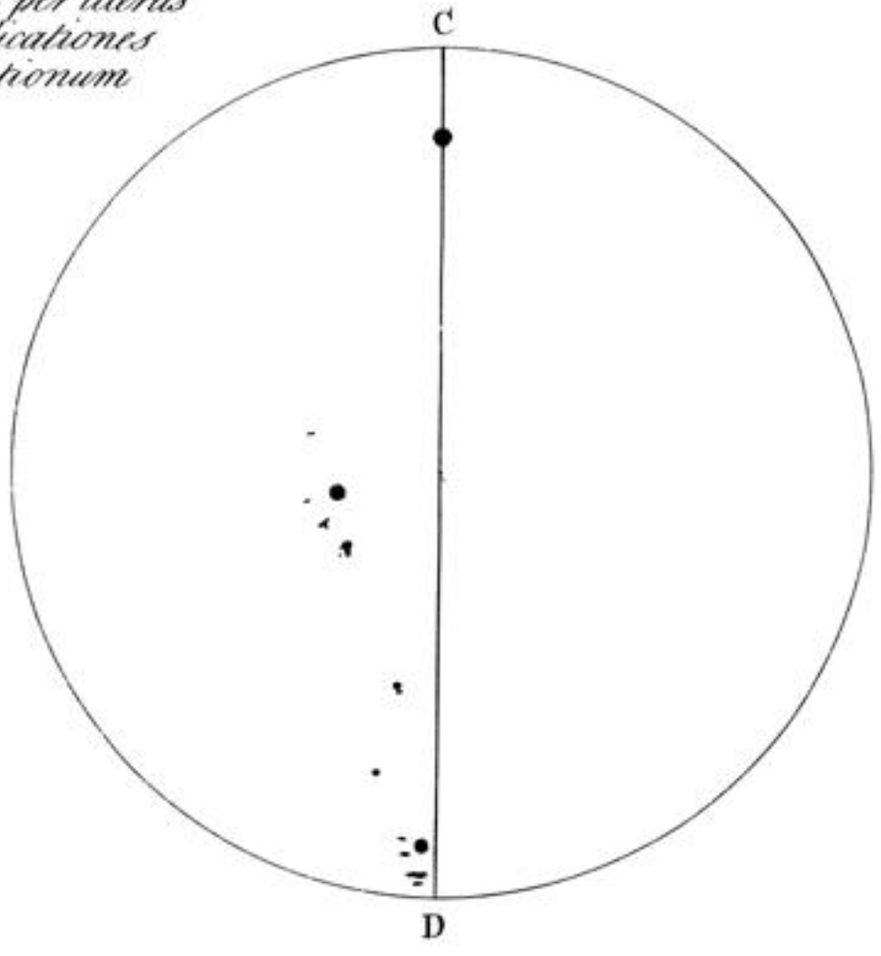
Solaris Eclipsis observata Romæ die 15 Septembr: 1727. N.S.

AB planum Circuli Verticalis per centrum Solis ducti

Maculæ in figura Solaris Disci CD suis locis collocatæ hic repetuntur ad exprimendum per literas singularum indicationes in serie observationum

CD planum circuli Verticalis per centrum Solis ducti





Discus Solis in digitos XII et quadrantes digitorum divisus in quo gradus peripheriæ 360 ab apice A sinistrorsum procedendo notantur; ut per singulas phases intersectio communis cum disco Lunæ indicari possit

Maculæ in disco Solis per Telescopium in chartam excepto ita erant constitutæ